

	x	y	x	y	x	y	x	y
Overlap Region	1	1	1	1	1	1	100	100
	2	2	2	2	2	2	200	200
	3	3	3	3	3	3	300	300
	4	4	4	4	4	4	400	400
	5	5	5	5	5	5	500	500
Non-overlap Region	10	100	30	2	3000	8000	3000	8000
	11	200	20	1	3010	9000	3010	9000
	12	300	34	80	3020	10000	3020	10000
	13	400	43	81	3030	11000	3030	11000
	14	500	400	8	3040	12000	3040	12000
Mean including overlap region	7.5 (=m1)	151.5 (=m2)	54.2 (=m1)	18.7 (=m2)	1511.5 (=m1)	5001.5 (=m2)	1660 (=m1)	5150 (=m2)
Mean excluding overlap region	12 (=m3)	300 (=m4)	105.4 (=m3)	34.4 (=m4)	3020 (=m3)	10000 (=m4)	3020 (=m3)	10000 (=m4)
Difference in the means including the overlap region ($d1=m2-m1$)	144		-35.5		3490		3490	
Difference in the means including the overlap region ($d2=m4-m3$)	288		-71		6980		6980	
Ratio of difference in means including and excluding overlap region ($z=d1/d2$)	0.5		0.5		0.5		0.5	

The value of z remains as a constant as far as the size of the overlap region is the same, irrespective of the values you enter in. Why? [x_i and y_i takes the same value in the overlap region]

If anyone knows, why the value of z remains the same, kindly let me know at: a.b@live.in